

## IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1           1. (Currently Amended) A spatial light modulator, comprising:  
2           memory elements configured to store data therein and shift data therebetween; and  
3           light modulation elements respectively in communication with the memory elements,  
4           wherein each of the light modulation elements is alterable in response to [the] data stored in  
5           the ~~respectively ones of the~~ corresponding memory element[s].
  
- 1           2. (Original) The spatial light modulator according to claim 1, wherein said memory  
2           elements are arranged in an array having rows and columns.
  
- 1           3. (Original) The spatial light modulator according to claim 2, wherein said memory  
2           elements are configured to shift the data bi-directionally between rows.
  
- 1           4. (Original) The spatial light modulator according to claim 2, wherein said memory  
2           elements are configured to shift the data bi-directionally between columns.
  
- 1           5. (Original) The spatial light modulator according to claim 2, wherein said memory  
2           elements are configured to shift the data bi-directionally between at least one of non-adjacent  
3           rows and non-adjacent columns.

1           6. (Original) The spatial light modulator according to claim 1, wherein said memory  
2 elements are arranged in a nonorthogonal pattern.

1           7. (Original) The spatial light modulator according to claim 1, wherein said memory  
2 elements are static memory elements.

1           8. (Original) The spatial light modulator according to claim 7, wherein each of the  
2 memory elements includes a feedback element.

1           9. (Original) The spatial light modulator according to claim 8, wherein the feedback  
2 element is a weak feedback element.

1           10. (Original) The spatial light modulator according to claim 1, further comprising  
2 access control elements connected to said respective memory elements.

1           11. (Original) The spatial light modulator according to claim 10, wherein said access  
2 control elements include a forward access control element operable to control the state of said  
3 respective memory element during a forward shift operation and a reverse access control  
4 element operable to control the state of said respective memory element during a reverse shift  
5 operation.

1           12. (Original) The spatial light modulator according to claim 1, wherein each of said  
2 memory elements further includes an output node electrically coupled to an electrode of said  
3 respective light modulation element and to an input node of an additional one of said memory  
4 elements.

1           13. (Original) The spatial light modulator according to claim 12, wherein said  
2 memory elements are interconnected in a shift register configuration.

1           14. (Original) The spatial light modulator according to claim 13, wherein said  
2 memory elements each include a master-slave flip-flop.

1           15. (Original) The spatial light modulator according to claim 13, further comprising:  
2 a timing circuit in communication with each of said memory elements to shift the data  
3 between said memory elements.

1           16. (Original) The spatial light modulator according to claim 15, wherein said timing  
2 circuit comprises a ripple clock.

1           17. (Original) The spatial light modulator according to claim 15, wherein said light  
2 modulation elements comprise liquid crystal material.

1           18. (Original) The spatial light modulator according to claim 17, wherein said light  
2 modulation elements further comprise:

3           a common electrode configured to receive a common electrode signal for said light  
4 modulation elements; and

5           a respective pixel electrode configured to receive the data stored in said respective  
6 memory elements.

1           19. (Original) The spatial light modulator according to claim 18, wherein said timing  
2 circuit is operable to shift inverted data from a first one to a second one of the memory  
3 elements and to switch the common electrode signal to alter the light modulation element  
4 associated with the second one of the memory elements as a function of the inverted data.

1           20. (Original) The spatial light modulator according to claim 1, wherein said light  
2 modulation elements comprise micromirrors.

1           21. (Original) The spatial light modulator according to claim 1, wherein said memory  
2 elements are arranged in blocks, a first one of said blocks configured to receive data from an  
3 external input and the others of said blocks configured to receive data from other ones of said  
4 memory elements.

1           22. (Original) A method for performing photolithography, said method comprising:  
2           loading data representing an image into memory elements in communication with  
3   respective light modulation elements;  
4           altering ones of the light modulation elements in response to the data loaded thereunto  
5   to transfer the image onto a substrate;  
6           shifting the data between the memory elements;  
7           altering ones of the light modulation elements in response to the data shifted thereunto  
8   to transfer the image onto the substrate.

1           23. (Original) The method according to claim 22, wherein each said altering further  
2   comprises:  
3           applying a voltage in response to the data to the change optical characteristics of the  
4   light modulation elements.

1           24. (Original) The method according to claim 22, wherein said shifting further  
2   comprises:  
3           utilizing a ripple clock to control the timing of said shifting.

1           25. (Original) The method according to claim 22, further comprising:  
2           moving at least one of the substrate and the light modulation elements relative to the  
3   other.

1           26. (Original) The method according to claim 25, wherein said altering in response to  
2   the shifted data is performed after said moving.